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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 31

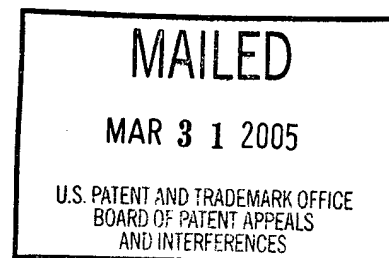
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEONARD H. BIEMAN

Appeal No. 2004-0659
Application No. 09/111,978

HEARD: December 8, 2004



Before JERRY SMITH, RUGGIERO, and GROSS, **Administrative Patent Judges**.

GROSS, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 30 through 85. Claims 1 through 29 have been allowed.

Appellant's invention relates to a system and method for obtaining height information by high speed, scanning phase measuring of an object at a vision station. Claim 30 is illustrative of the claimed invention, and it reads as follows:

30. A method for high-speed scanning measurement of an object at a vision station, the vision station having a detector, in order

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to determine dimensional information associated with the object,
the method comprising the steps of:

projecting a pattern of light;

maintaining the projected pattern of light and the detector
in a substantially fixed relation to each other;

moving the object relative to the projected pattern of light
so as to scan the projected pattern of light across an area of a
surface of the object to generate an imagable light signal;

imaging the imagable light signal onto the detector, the
detector having a first, a second, and a third detector element,
wherein the area of the surface of the object is imaged onto the
first detector element at a first phase of the projected pattern
of light, the area of the surface of the object is imaged onto
the second detector element at a second phase of the projected
pattern of light, and the area of the surface of the object is
imaged onto the third detector element at a third phase of the
projected pattern of light;

measuring with the detector an amount of light from the area
of the surface of the object to the first detector element at the
first phase, to the second detector element at the second phase,
and to the third detector element at the third phase; and

computing dimensional information based on the measuring
step.

No prior art references of record have been relied upon by
the examiner in rejecting the appealed claims, as the rejection
under 35 U.S.C. § 103 was withdrawn by the examiner on page 4 of
the Examiner's Answer.

Claims 30 through 85 stand rejected under 35 U.S.C. § 251 as
being an improper recapture of broadened claimed subject matter

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surrendered in the application for the patent upon which the present reissue is based.

Reference is made to the Examiner's Answer (Paper No. 25, mailed July 30, 2003) for the examiner's complete reasoning in support of the rejection, and to appellant's Brief (Paper No. 24, filed March 17, 2003) and Reply Brief (Paper No. 26, filed October 8, 2003) for the appellant's arguments thereagainst.

OPINION

As a preliminary matter, we note that appellant indicates on page 7 of the Brief that "[e]ach of claims 30-85 stands alone for the purposes of this appeal." However, as the claims are not argued separately in accordance with 37 C.F.R. § 1.192(c)(7), which was in effect at the time of appellant's brief, we will treat the claims as standing or falling together, with claim 30 as representative.

We have carefully considered the claims and the respective positions articulated by appellant and the examiner. As a consequence of our review, we will affirm the reissue recapture rejection of claims 30 through 85.

Background

In the application that resulted in U.S. Patent No. 5,646,733, the basis for this reissue application, appellant added the following three limitations to overcome an obviousness rejection: (1) that the object moves relative to the projector "at a substantially constant velocity," (2) that the detector elements "are substantially uniformly spaced," and (3) that the projector and the detector are in "a substantially" fixed relation to each other. In trying to distinguish the amended claims over the applied prior art, appellant argued (page 4 of the Amendment dated November 18, 1996):

only with the present invention are multiple scans coordinated with relative motion at a substantially constant velocity of the object to extract phase information from substantially uniformly spaced detector elements. Also, the present invention is limited in that the at least one projector is maintained in a substantially fixed relation to the detector.

Appellant further asserted (page 5 of the Amendment dated November 18, 1996) that whereas "Bullock is not affected by vibrations or changes in the rate of relative object motion,"

[t]his is quite different from the present invention, as claimed, wherein because multiple scans are coordinated with the substantially uniform motion of the object in order to extract phase information, vibrations and changes in the rate of motion will

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affect the measurement at the substantially uniformly spaced detector elements.

On reissue, appellant has **completely removed** the first two limitations that were added for patentability and amended the third limitation to read that "the projected pattern of light," rather than the projector, is maintained in a substantially fixed relation to the detector. The examiner asserts (Answer, page 3) that "the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. § 251." Appellant, on the other hand, contends (Brief, page 13) that "the present reissue claims 30, 42, 56, 60, and 72 include other limitations that clearly distinguish over the cited art in a similar manner as the omitted limitations. A patentee may obtain a reissue claim that varies materially from a claim originally surrendered even though it omits a limitation added to obtain issuance."

Pertinent Case Law

In ***In re Clement***, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997), the Federal Circuit set forth a test for determining

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whether the claims of a reissue application recapture surrendered subject matter. The test is a three step process as follows:

(1) if the reissue claim is as broad as or broader than the canceled or amended claim in all aspects, the recapture rule bars the claim; (2) if it is narrower in all aspects, the recapture rule does not apply, but other rejections are possible; (3) if the reissue claim is broader in some aspects, but narrower in others, then: (a) if the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim; (b) if the reissue claim is narrower in an aspect germane to prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible.

The test in **Clement** compares the reissue claims to the claims of the patented application (upon which the reissue is based) prior to the amendment that resulted in the patent. If the reissue claims are at least as broad in all aspects or are at least as broad in an aspect related to a prior art rejection while narrower in an aspect unrelated to the prior art rejection, then the recapture rule bars the claims. If the reissue claims are narrower in all aspects or are narrower in an aspect related to a prior art rejection while broader in an aspect unrelated to the prior art rejection, then the recapture rule does not apply.

In **Hester Industries Inc. v. Stein Inc.**, 46 USPQ2d 1641 (Fed. Cir. 1998), the patentee eliminated completely, in a

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reissue application, two limitations of the original claims that were argued as distinguishing the claims over the prior art. The Court analyzed the prosecution history of the original patent and determined that Williams, the inventor of Hester's patent, had argued that "each of these limitations was 'critical' with regard to patentability," that those arguments "constitute[d] an admission by Williams that these limitations were necessary to overcome the prior art," and that "Williams, through his admission . . . surrendered claim scope that does not include these limitations." **Hester**, 46 USPQ2d at 1649. The Court stated, "We share the district court's discomfort with Williams' attempt to remove, through reissue, the 'solely with steam' and 'two sources of steam' limitations after having relied so heavily on those limitations to obtain allowance of the original patent claims over the prior art," referencing the recapture rule discussed in **Clement** at 131 F.3d at 1468, 45 USPQ2d at 1164. **Hester**, 46 USPQ2d at 1647.

After determining that the reissue claims in **Hester** did include surrendered subject matter, the Court recognized that "the recapture rule may be avoided in some circumstances." **Id.** at 1649. Therefore, the Court continued its analysis by

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determining "whether the reissue claims were materially narrowed in other respects. *See, e.g., Mentor*, 998 F.2d at 996, 27 USPQ2d at 1525 ('Reissue claims that are broader in certain respects and narrower in other may avoid the effect of the recapture rule.');

Clement, 131 F.3d at 1470, 45 USPQ2d at 1165." ***Id.*** The Court found that the alleged narrowing aspects were not overlooked during the prosecution of the original patent and, therefore, that the case was not one "which involve[d] the addition of material limitations that overcome the recapture rule." ***Id.*** at 1650.

The Court revisited reissue recapture in ***Pannu v. Storz Instruments Inc.***, 59 USPQ2d 1597 (Fed. Cir. 2001). In an application for patent, Pannu argued a distinction of "a continuous substantially circular arc having a diameter greater than the diameter of the lens body . . . which significantly enhance the easy insertibility of applicant's lens and significantly reduce any possibility of snagging delicate eye tissue" over the prior art. In the ensuing reissue application, Pannu eliminated that limitation from the claims, but further limited the size and position of the snag resistant means. The Court stated:

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The addition of the 'continuous, substantially circular arc' limitation . . . and the statements made by Pannu to the examiner during prosecution of the '855 patent limited the claim to exclude an interpretation that did not include a continuous, substantially circular arc. See *Southwall Techs., Inc. v. Cardinal AG Co.*, 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (1995). The shape of the haptics was broadened during reissue and was the same subject matter that was surrendered during prosecution.

Pannu, 59 USPQ2d at 1600.

As to the narrowing aspects of the reissue claims, the Court held that since the narrowing was related to the positioning and dimensions of the snag resistant means rather than to the shape of the haptics, "the reissued claims were not narrowed in any material respect compared with their broadening." **Id.** at 1601. The Court concluded that "[i]n prosecuting the '855 patent, Pannu specifically limited the shape of the haptics to a 'continuous, substantially circular arc.' On reissue, he is estopped from attempting to recapture the precise limitation he added to overcome prior art rejections." **Id.**

Discussion

As stated in **Hester**, 46 USPQ2d at 1648, "[a]pplication of the recapture rule begins with a determination of whether and in what respect the reissue claims are broader than the original

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patent claims." Clearly, the claims before us are broader than the original patent claims in that they omit the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced."

"Having determined that the reissue claims are broader in these respects, under the recapture rule we next examine whether these broader aspects relate to surrendered subject matter." *Id.* Appellant (Brief, page 11) by directing our attention to step 3(b) of the **Clement** test appears to suggest that the broader aspects do not relate to surrendered subject matter, as step 3(b) states that the recapture rule does not bar the claim if the reissue claim is narrower in an aspect germane to a prior art rejection, and broader in an aspect unrelated to the rejection. Appellant explains (Reply Brief, page 4) that the broadening in the reissue claims (i.e., the removal of the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced") is "unrelated to the rejection . . . since those limitations do not further distinguish the claims from the prior art, and thus are not pertinent to the original rejection." Appellant alleges (Reply Brief, page 4) that:

It is the moving of the detector relative to the object, the light pattern whose relationship remains fixed to the detector elements in the present claimed

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invention (not so in the prior art, in which the pattern of light moves, even of [sic] the projector does not) that are germane to the rejection and to the surrendered subject matter.

Thus, appellant concludes that according to **Clement**, the recapture rule does not bar the claims.

The facts of the present case parallel the situation in **Pannu**. Like appellant in the present case, Pannu argued that the broadening did not relate to subject matter surrendered during prosecution. The Court in **Pannu** explained that as originally filed, none of the claims in the application limited the shape of the haptics and that Pannu filed an amendment defining the shape of the haptics after the examiner rejected the claims as obvious. Similarly, none of appellant's original claims limited the movement of the object relative to the projector to a "substantially constant velocity" nor the detector elements to be "uniformly spaced," and appellant filed an amendment adding the above-noted limitations after the examiner rejected the claims as obvious. Pannu argued to the examiner that none of the applied references taught the shape recited in the amendment. Similarly, appellant argued to the examiner that none of the applied references taught substantial constant velocity or uniform spacing. The Court in **Pannu** concluded that Pannu's argument that

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the broadening did not relate to subject matter surrendered during prosecution was "without merit." **Pannu**, 59 USPQ2d at 1600. We likewise find appellant's arguments that the broadening did not relate to the rejection, or rather to subject matter surrendered, to be without merit.

Additionally, as explained by the Court in **Hester**, 46 USPQ2d at 1648, both amendments and arguments made to overcome prior art evidence a surrender. Here, appellant, in the amendment that resulted in issuance of the patent upon which this reissue application is based, added the limitations "at a substantially constant velocity" and "which are substantially uniformly spaced" and argued that they distinguished over the prior art. Therefore, the broadening, or omission of those limitations, is very much germane to the rejection and, thus, surrendered subject matter.

Appellant further contends (Brief, pages 10-11) that "the subject matter surrendered during prosecution of the parent application is that of the original claims," not "all claims that do not have some specific limitation added by amendment." Appellant (Brief, page 12) directs our attention to **In re Richman**, 409 F.2d 269, 276, 161 USPQ 359, 363-64 (CCPA 1969), and

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In re Wadsworth, 27 CCPA 735, 107 F.2d 596, 43 USPQ 460, 464 (CCPA 1939), for support of this position. Similarly, appellant (Brief, page 13) points to **Ball Corp. v. United States**, 29 F.2d 1429, 1437; 221 USPQ 289, 295 (Fed. Cir. 1984), as evidence that "[a] patentee may obtain a reissue claim that varies materially from a claim originally surrendered even though it omits a limitation added to obtain issuance." Although we acknowledge the statements made by the Court in the cases cited by appellant, we disagree that those are the controlling case law. In addition, although **Ex Parte Eggert**, 67 USPQ2d 1716 (BdPatApp&Int 2003), (not argued by appellant) would appear to support appellant's position, **Eggert** differs from the present case in that the limitation added for patentability was broadened, not deleted, in the reissue claims. Therefore, we do not view **Eggert** as dispositive of the issues in the present case.

As explained *supra*, in the original application for patent, appellant added three limitations to the claims and argued how each limitation differed from the prior art applied against the claims. In **Hester**, Williams (the inventor) likewise had argued that two limitations were critical with regard to patentability. The Court held that those arguments "constitute[d] an admission

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by Williams that these limitations were necessary to overcome the prior art," and that "Williams, through his admission . . . surrendered claim scope that does not include these limitations." **Hester**, 46 USPQ2d at 1649. Similarly, in **Pannu**, where a limitation added to overcome a prior art rejection was removed in a reissue application, The Court stated:

The addition of the 'continuous, substantially circular arc' limitation . . . and the statements made by Pannu to the examiner during prosecution of the '855 patent limited the claim to exclude an interpretation that did not include a continuous, substantially circular arc. See *Southwall Techs., Inc. v. Cardinal AG Co.*, 54 F.3d 1570, 1576, 34 USPQ2d 1673, 1676 (1995). The shape of the haptics was broadened during reissue and was the same subject matter that was surrendered during prosecution.

Pannu, 59 USPQ2d at 1600. Thus, according to the recent case law, the subject matter surrendered is any claim that does not include the limitations added during the prosecution of the original patent application.

We note that although **Hester** and **Pannu** do not explicitly overrule **Richman**, **Wadsworth**, and **Ball**, they do indicate a shift in the position of the Federal Circuit and are, therefore, controlling. We also note that the Court in both **Pannu** and **Hester** recognized that after determining what subject matter was surrendered they still needed to consider whether the claims were

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materially narrowed in other respects. See **Hester**, 46 USPQ2d at 1649, and **Pannu**, 59 USPQ2d at 1601.

Accordingly, having determined that the subject matter surrendered is all claims which do not include the limitations of (1) that the object moves relative to the projector "at a substantially constant velocity," and (2) that the detector elements "are substantially uniformly spaced," we must consider whether the claims have been materially narrowed. Appellant argues two limitations are materially narrower than the patent claims.

First, appellant asserts (Brief, page 10) that the reissue claims "are substantially narrower in a manner directly material to the rejection AND are different than those claims surrendered in Applicant's amendment in the parent application, and distinguish from the art overcome in the parent application." Specifically, appellant (Brief, pages 11-12 and 15) asserts that claim 30, for example, images the same area of the object onto first, second, and third detector elements at first, second, and third phases, respectively, of the pattern of light. Appellant urges that this is:

narrower and germane to the rejection because the prior art references kept the object and the detector in a fixed relationship and moved the projected light, thus

the same area of the object always imaged to the same detector at each different phase of the light as the light moved. Thus the reissue claims distinguish over the prior art in a manner germane to the rejection.

Second, appellant argues (Brief, pages 14-15, and Reply Brief, page 3) that "maintaining the projected pattern of light and the detector in a substantially fixed relation to each other," rather than the projector and the detector, narrows the claims in a manner germane to the original rejection, thereby distinguishing over the situation in **Pannu**.

Regarding the imaging of the detector elements onto three detector elements at first, second, and third phases, respectively, despite appellant's arguments to the contrary, we find that this limitation does not further narrow patent claim 1. Specifically, claim 1 recited "a plurality of separate detector elements which are substantially uniformly spaced," which implies that there are at least three detector elements (or the spacing limitation makes no sense). Further, claim 1 recited that "each of the detector elements produce [sic] an image having a different phase of the same scanned surface." Thus, claim 1 included imaging the same surface onto three detector elements, each at a different phase. Merely stating the limitation a different way does not constitute a narrowing of the claim.

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Accordingly, we find no material narrowing regarding the imaging onto the detector elements at different phases.

As to "maintaining the projected pattern of light and the detector in a substantially fixed relation to each other," this limitation does not relate to either the velocity of the object relative to the projector nor to the spacing of the detector elements, the two limitations that were broadened. Similarly, the imaging limitation discussed *supra* does not relate to either of the broadening limitations. Accordingly, "the reissued claims were not narrowed in any material respect compared with their broadening." *Pannu*, 59 USPQ2d at 1601. Consequently, we find that there has been no material narrowing to avoid the recapture rule, and, thus, we will affirm the rejection.

CONCLUSION

The decision of the examiner rejecting claims 30 through 85 under 35 U.S.C. § 251 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

Jerry Smith
JERRY SMITH

JERRY SMITH
Administrative Patent Judge

Joseph F. Rugg
JOSEPH F. RUGG

JOSEPH F. RUGGIERO
Administrative Patent Judge

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